FIG. 1

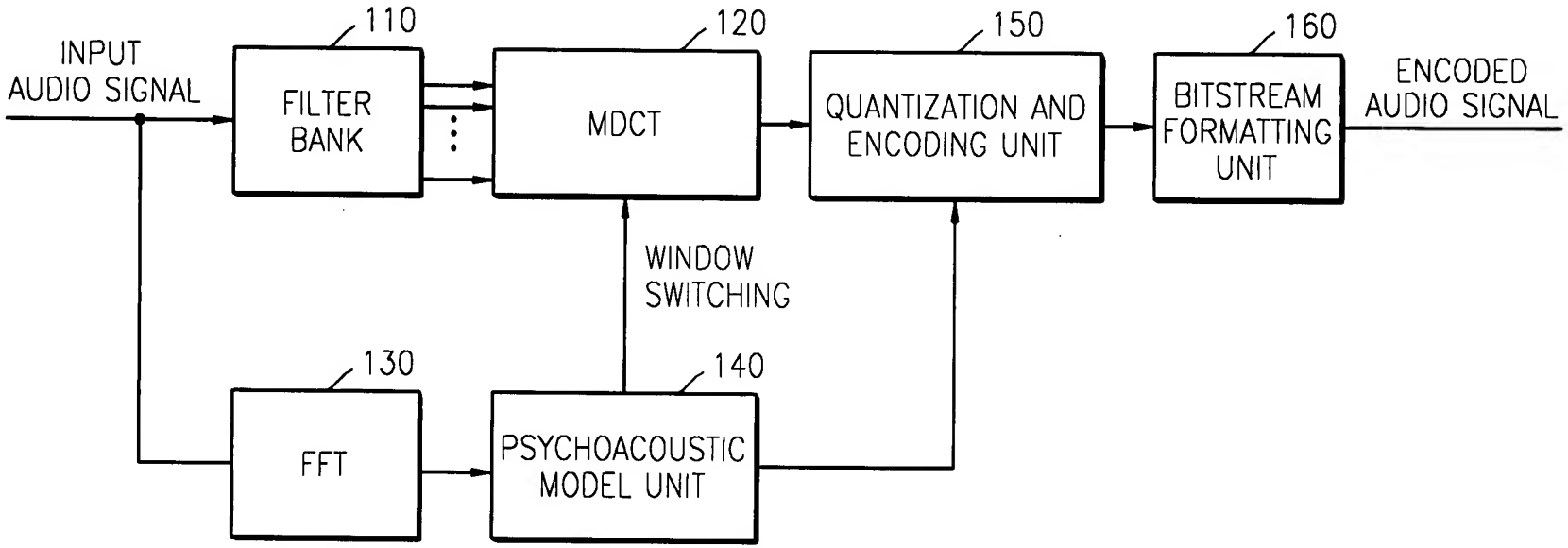

INPUT AUDIO SIGNAL
110
FILTER BANK
120
MDCT
150
QUANTIZATION AND ENCODING UNIT
160
BITSTREAM FORMATTING UNIT
ENCODED AUDIO SIGNAL
WINDOW SWITCHING
130
FFT
140
PSYCHOACOUSTIC MODEL UNIT

FIG. 2

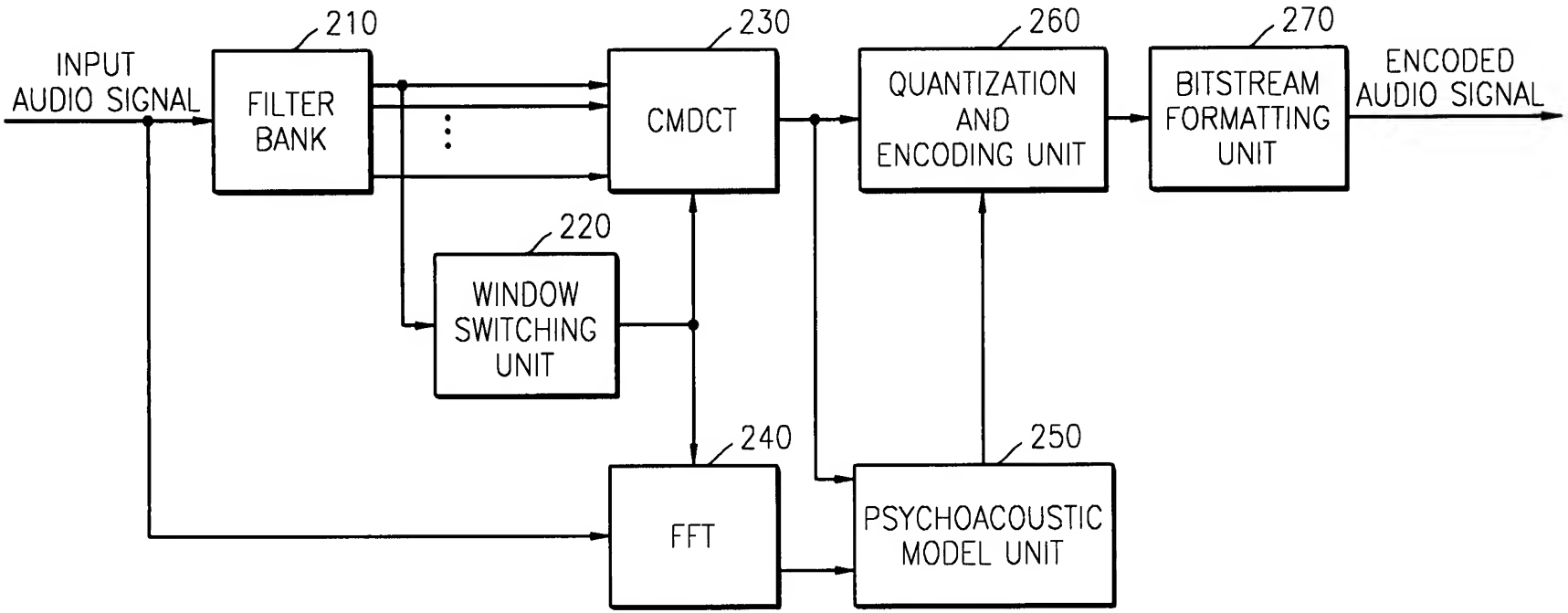

INPUT AUDIO SIGNAL
210
FILTER BANK
230
CMDCT
260
QUANTIZATION AND ENCODING UNIT
270
BITSTREAM FORMATTING UNIT
ENCODED AUDIO SIGNAL
220
WINDOW SWITCHING UNIT
240
FFT
250
PSYCHOACOUSTIC MODEL UNIT

FIG. 3

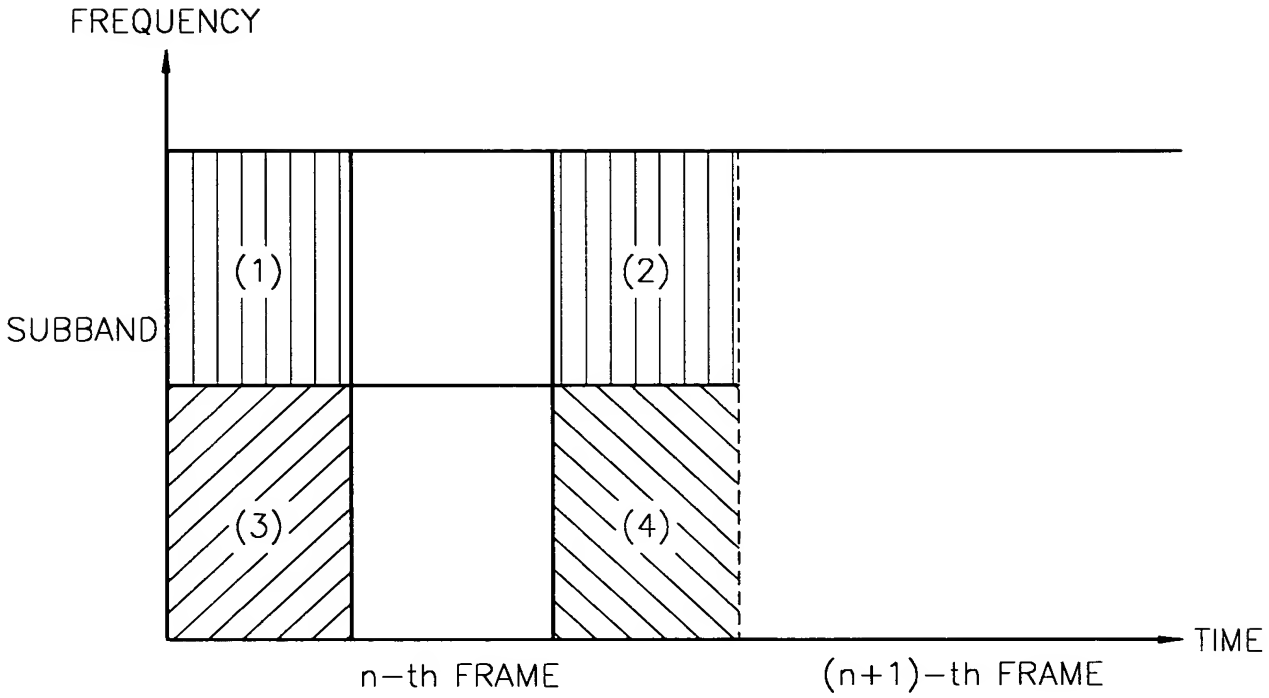


FIG. 4

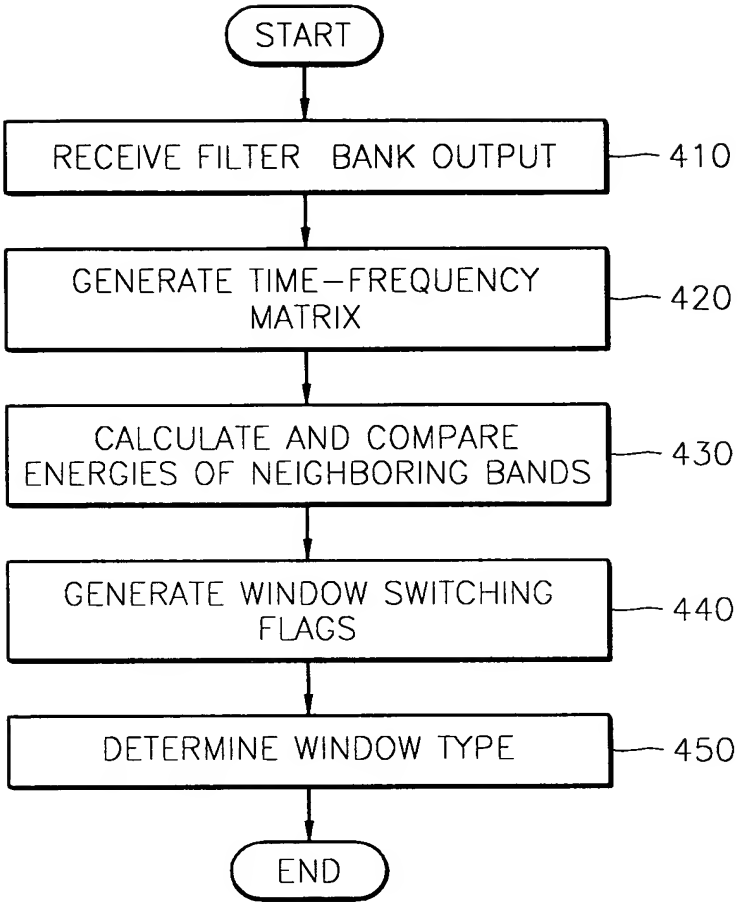

START
RECEIVE FILTER BANK OUTPUT
410
GENERATE TIME-FREQUENCY MATRIX
420
CALCULATE AND COMPARE ENERGIES OF NEIGHBORING BANDS
430
GENERATE WINDOW SWITCHING FLAGS
440
DETERMINE WINDOW TYPE
450
END

FIG. 5

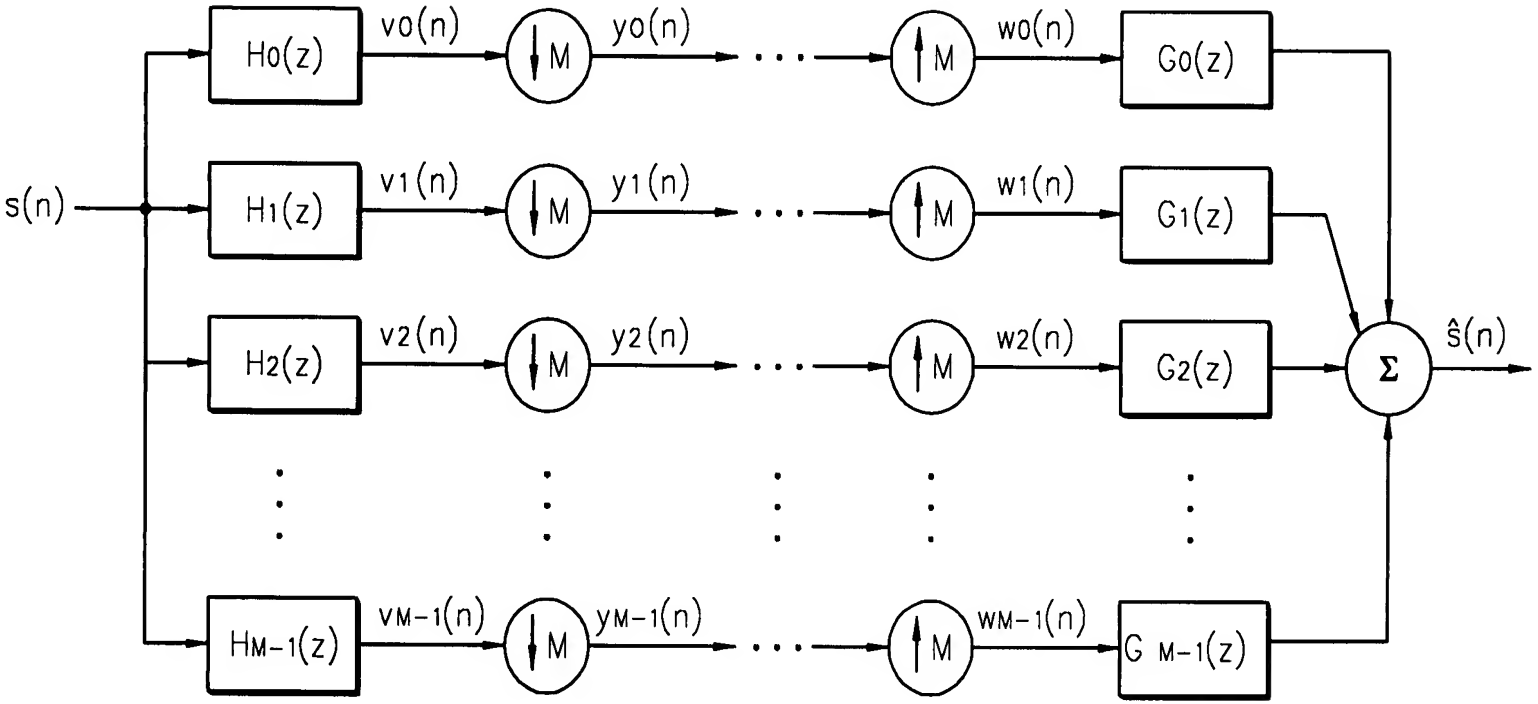

s(n)
H0(z)
v0(n)
M
y0(n)
M
w0(n)
G0(z)
H1(z)
v1(n)
M
y1(n)
M
w1(n)
G1(z)
H2(z)
v2(n)
M
y2(n)
M
w2(n)
G2(z)
HM-1(z)
vM-1(n)
M
yM-1(n)
M
wM-1(n)
G M-1(z)
Σ
ŝ(n)

FIG. 6

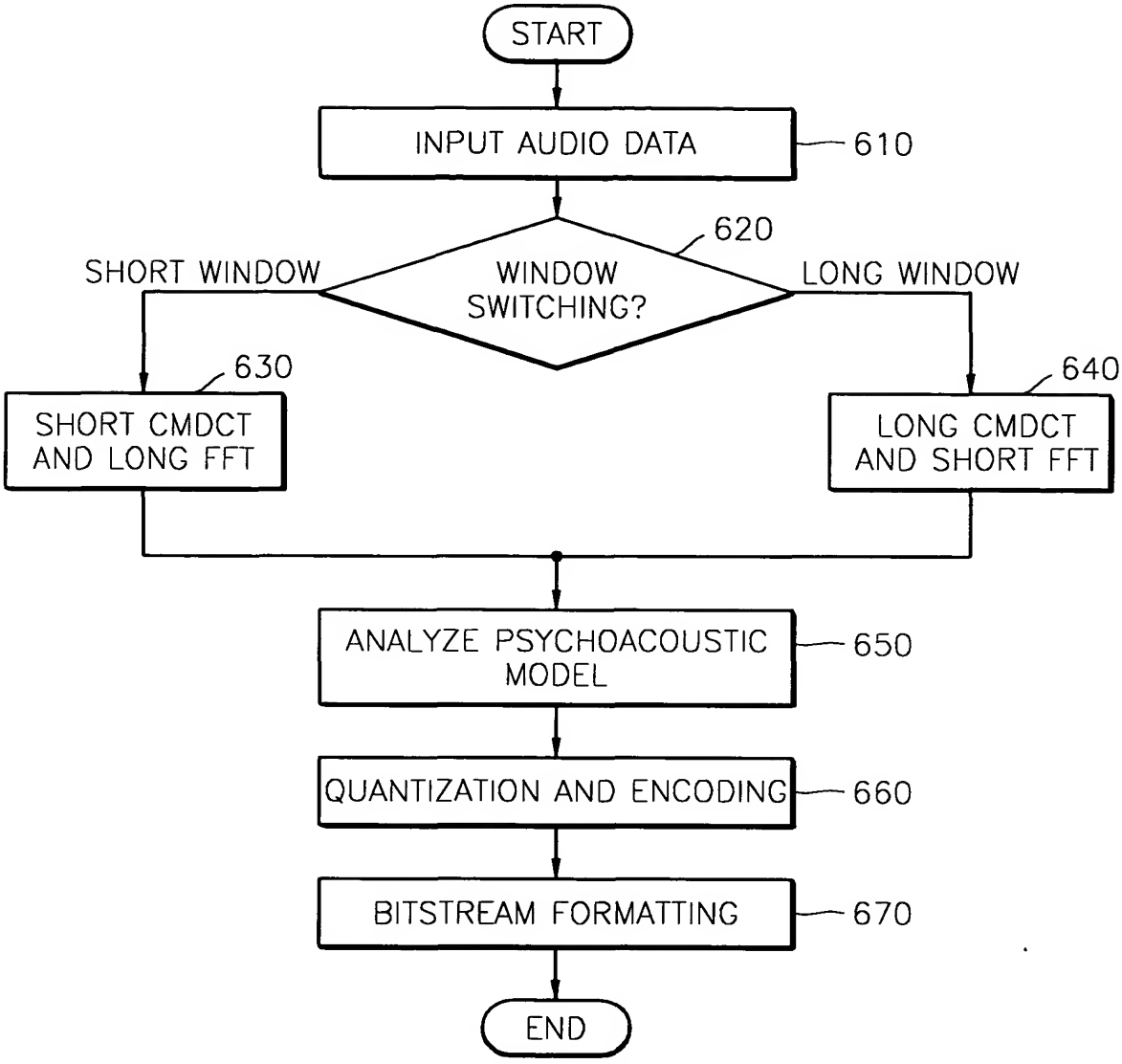

START
INPUT AUDIO DATA
610
620
WINDOW SWITCHING?
SHORT WINDOW
LONG WINDOW
630
SHORT CMDCT AND LONG FFT
640
LONG CMDCT AND SHORT FFT
ANALYZE PSYCHOACOUSTIC MODEL
650
QUANTIZATION AND ENCODING
660
BITSTREAM FORMATTING
670
END

FIG. 7

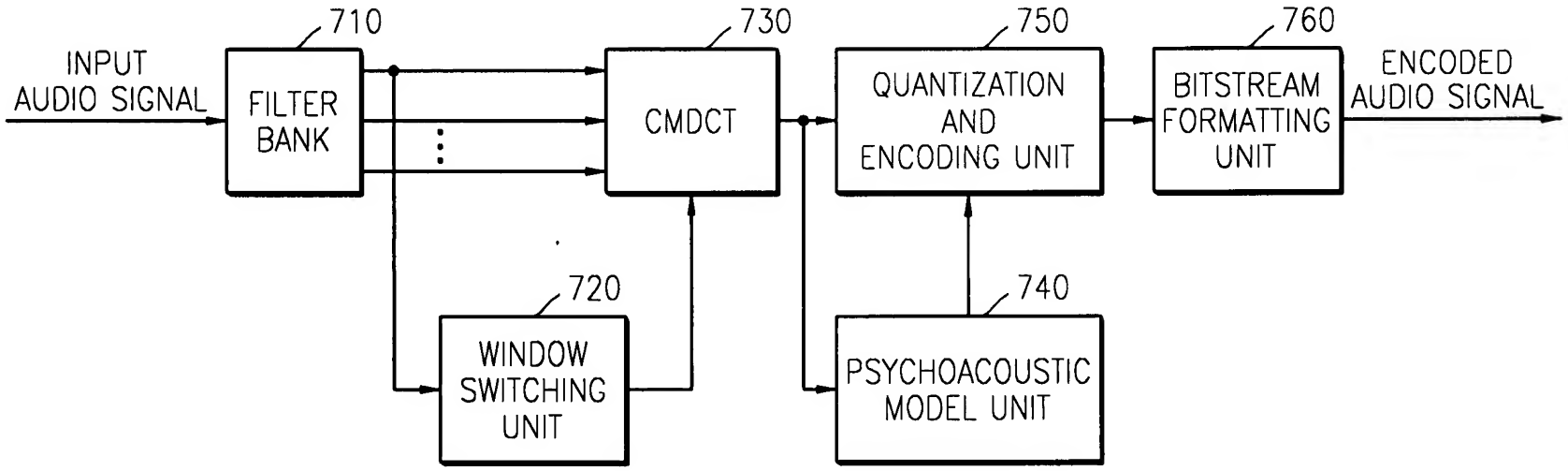
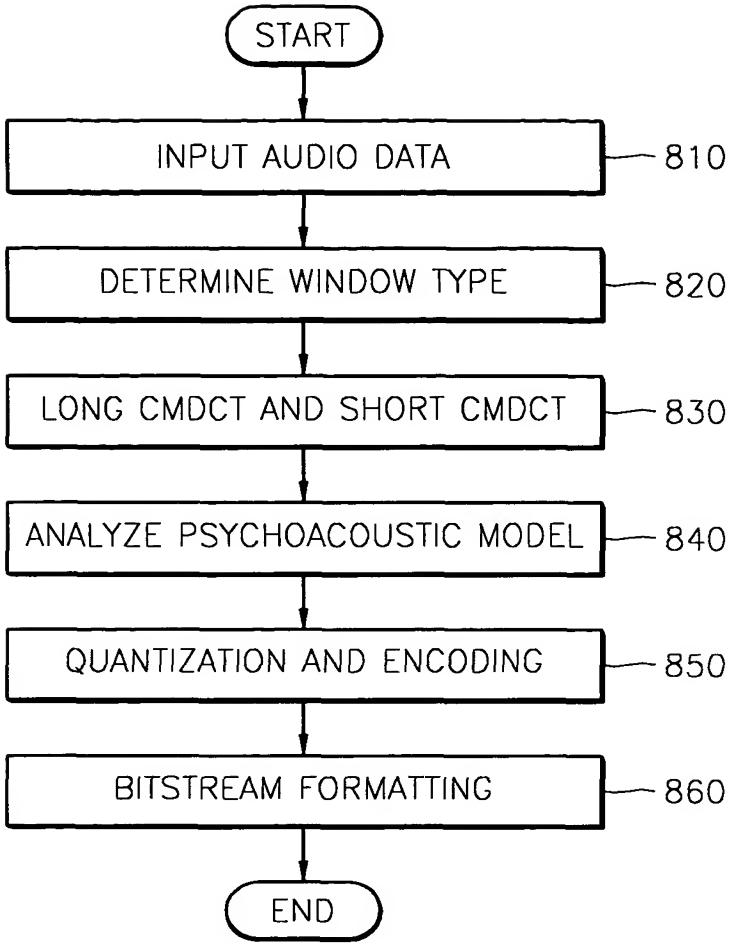

INPUT AUDIO SIGNAL
710
FILTER BANK
730
CMDCT
750
QUANTIZATION AND ENCODING UNIT
760
BITSTREAM FORMATTING UNIT
ENCODED AUDIO SIGNAL
720
WINDOW SWITCHING UNIT
740
PSYCHOACOUSTIC MODEL UNIT

FIG. 8


START
INPUT AUDIO DATA
810
DETERMINE WINDOW TYPE
820
LONG CMDCT AND SHORT CMDCT
830
ANALYZE PSYCHOACOUSTIC MODEL
840
QUANTIZATION AND ENCODING
850
BITSTREAM FORMATTING
860
END